

Appln. No. 10/773,047
Reply to Office Action of Oct. 4, 2005

REMARKS

The applicant notes with approval the allowance of claims 23-26 and the allowability of claims 5-8, 12, and 13 if rewritten in independent form. Such rewriting is accomplished above as claims 5-8, 12, and 13 should also be allowed.

The specification has been amended on page 2 above to complete the reference to a related co-pending application.

The attached ABSTRACT has been shortened to comply with current standards.

Claims 1 and 2 have now been amended to specify that at least some of the electrical contacts are maintained by the presence of non-conducting foam pressure pads, although some of the non-lead (Pb) connections of the principal reference Chien 5,947,580 are used, there is no contemplation or suggestion of the use of non-conducting foam pressure pads to maintain electrical contact. Chien in column 8, lines 51-56, noted by the Examiner recites "a pad" without any reference numeral and does not suggest that any pad is non-conducting foam and use for electrical contact maintenance.

Absent any definitive teaching, the lead (Pb)-free module of claim 1 with foam contacting contact pressure pads of claims 1 and 2 should rise to the level of non-obviousness and this claim allowed. To avoid any confusion with respect to electrical lead wires and lead-free (Pb) connections, the latter has been referred to in the claims as "lead-free (Pb)"

Claim 9 has also been amended to specify that the pressure applying means is

Appln. No. 10/773,047
Reply to Office Action of Oct. 4, 2005

non-conducting foam. As indicated above, this feature goes well beyond and disclosure of Chien. It provides reliable electrical contact and eliminates the dangers of lead (Pb) in the environment and further eliminates any heating in the assembly of these circuits. All these advantages are attributable to the combination of claim 9 which should be allowed.

The rejection of claims 4, 10, 11, 14-16 and 18-21 under 35 U.S.C. §103 on pages 4 through 6 of the Office Action are believed overcome by the amendment of claim 3 with respect to dependent claim 4.

The same is true for claim 10 as amended in claim 9 specifying "non-conducting foam" as the pressure-applying means.

Claim 15, dependent upon claim 14 and claim 19, defines the spring clamp arrangement whereby both opposite face terminals of a battery are connected to different traces of a circuit board Fig. 6. Such an arrangement is unanticipated or disclosed by Chien alone or in combination with any art of record. Claim 15 will be amended to incorporate claim 14 if found allowable.

Claims 16 and 18 define a switch with terminals and spring clamps secure the switch to the circuit board traces. The part assembled mechanically and electrically to the circuit board in a lead-free (Pb) method. This is distinct from the switch 180 of Chien which appears to be integrated into the assembly, part on the circuit board and part secured to it.

The addition of the disclosure of Smith U.S. Patent 2,505,154, although reflecting

Appln. No. 10/773,047

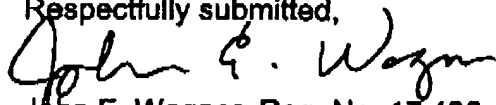
Reply to Office Action of Oct. 4, 2005

the depth of the search of the Examiner do not appear to combine with Chien U.S. Patent 5,947,580 to render obvious claims 17, 22, 27, and 28 as suggested by the Examiner. Smith's wax potted magneto protects it from moisture but electrical connections internally are soldered or connected by terminal screws and nuts (col. 3, lines 32-53). The applicant's use of potting enhances and secures the electrical connections as well as weather protection. It prevents the clamp connections from moving and from corrosion which can be notorious in electronic equipment.

The bringing together in one combination, lead-free (Pb) mechanical and electrical connections via pressure pad usage in potted combination solves many critical problems in today's electronics equipment and in our threatened environment. It should be recognized as a significant novel, meritorious and non-obvious advance in the state of modular electronics and worthwhile of patenting.

Therefore, Claims 1-28 should be allowed and this application passed to issue. Attached are an Amendment Transmittal reflecting the added independent claims and a Petition for Extension of Time (two months) (Small Entity) as well as authorization to charge and fees in connection with the filing of this amendment to Deposit Account 23-0083.

Respectfully submitted,



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Appln. No. 10/773,047
Reply to Office Action of Oct. 4, 2005

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